

**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

John Victor LAMONT, Robert Ivan McCONNELL,  
Stephen Peter FITZGERALD

Application No.: New U.S. Patent Application

Filed: January 17, 2002

Docket No.: 111723

For: IMAGING METHOD

**PRELIMINARY AMENDMENT**

Director of the U.S. Patent and Trademark Office  
Washington, D. C. 20231

Sir:

Prior to initial examination, please amend the above-identified application as follows:

**IN THE CLAIMS:**

Please replace claims 4-7 and 9-15 as follows:

4. (Amended) A method according to claim 2, wherein, after detecting the first molecule, the first inspection window is repositioned or enlarged so that one or more of the discrete reaction sites is also located within the window, detecting the one or more sites and, by reference to the first molecule and the one or more sites, aligning a further inspection window in registration with each reaction site of the array.
5. (Amended) A method according to claim 1, wherein the array of reaction sites defines a corner within which the first molecule is located.
6. (Amended) A method according to claim 1, wherein step (i) further comprises detecting a second molecule located on the solid support at a known position with respect to

the array, and aligning the inspection windows by reference to both first and second molecules.

7. (Amended) A method according to claim 1, wherein imaging is carried out by detecting emitted radiation.
9. (Amended) A method according to claim 1, wherein the molecules of the array are capable of reacting with an analyte.
10. (Amended) A method according to claim 1, wherein the molecules of the array are polynucleotides, antibodies, proteins or organic compounds.
11. (Amended) A method according to claim 1, wherein the solid support is less than 1 cm<sup>2</sup>.
12. (Amended) A method according to claim 1, wherein the solid support is a ceramic, silicon or glass material.
13. (Amended) A method according to claim 1, wherein the molecules of the array are covalently attached to the surface of the solid support.
14. (Amended) A method according to claim 1, wherein the image generated in step (i) must be above a pre-defined value in order to proceed with steps (ii) and (iii).
15. (Amended) A computer programmed to carry out a method according to claim 1.

REMARKS

Claims 1-16 are pending. By this Preliminary Amendment, claims 4-7 and 9-15 are amended to eliminate multiple dependencies. Prompt and favorable examination on the merits is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Thomas J. Pardini  
Registration No. 30,411

JAO:TJP/cmm

Attachment: Appendix

Date: January 17, 2002

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
--

## APPENDIX

## Changes to Claims:

The following are marked-up versions of the amended claim:

4. (Amended) A method according to claim 2 ~~or claim 3~~, wherein, after detecting the first molecule, the first inspection window is repositioned or enlarged so that one or more of the discrete reaction sites is also located within the window, detecting the one or more sites and, by reference to the first molecule and the one or more sites, aligning a further inspection window in registration with each reaction site of the array.
5. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the array of reaction sites defines a corner within which the first molecule is located.
6. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein step (i) further comprises detecting a second molecule located on the solid support at a known position with respect to the array, and aligning the inspection windows by reference to both first and second molecules.
7. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein imaging is carried out by detecting emitted radiation.
9. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the molecules of the array are capable of reacting with an analyte.
10. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the molecules of the array are polynucleotides, antibodies, proteins or organic compounds.
11. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the solid support is less than 1 cm<sup>2</sup>.
12. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the solid support is a ceramic, silicon or glass material.

13. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the molecules of the array are covalently attached to the surface of the solid support.
14. (Amended) A method according to claim 1 ~~any preceding claim~~, wherein the image generated in step (i) must be above a pre-defined value in order to proceed with steps (ii) and (iii).
15. (Amended) A computer programmed to carry out a method according to claim 1 ~~any preceding claim~~.